

Ergonomic Screening Tool

Pushing and Pulling Tasks



Location: _____ Date: _____ Job/Task: _____

Please download this form as a master copy using the “Save As” feature. Please check back periodically to ensure you have the most up-to-date master version. Organizations often use equipment like carts, pallet jacks, overhead hoists, and articulating arms to reduce lifting and carrying by workers. These aids introduce pushing and pulling demands that may cause injuries. This screening tool is designed to evaluate manual push/pull tasks by identifying the related risks and developing possible solutions. Use the last page of this document for additional assistance.

Risk Factor	Observation/Evaluation	Score	Comment (Use “Additional Comments” Section if Needed)
A. Repetition	<input type="checkbox"/> Low (0) <input type="checkbox"/> Moderate (1) <input type="checkbox"/> High (2)		
B. Duration	<input type="checkbox"/> Low (0) <input type="checkbox"/> Moderate (1) <input type="checkbox"/> High (2)		
C. Object Weight (lbs)	<input type="checkbox"/> Under 250 lbs. (0) <input type="checkbox"/> Greater than/equal to 250 lbs. (1)		
D. Awkward Posture	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
E. Physical Indicator of Excess Force	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
F. Floor Risk Factors	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		

Ergonomic Screening Tool

Pushing and Pulling Tasks, Continued

Risk Factor	Observation/Evaluation	Score	Comment
G. Unusual Object Features	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
H. Environmental Factors	<input type="checkbox"/> No (0) <input type="checkbox"/> Yes (1)		
Total Score: (max 10)			

Possible Solution	Observation/Evaluation	Comment
I. Automated Material Handling Equipment	<input type="checkbox"/> Yes <input type="checkbox"/> No	
J. Floor Improvements	<input type="checkbox"/> Yes <input type="checkbox"/> No	
K. Equipment Improvements	<input type="checkbox"/> Yes <input type="checkbox"/> No	
If needed, include additional comments here:		

Ergonomic Screening Tool: Pushing and Pulling Tasks



Definitions

Risk Factor	Definition/Example
Repetition	Select from the following: Low — Less than 20 tasks per hour. Moderate — 20-60 tasks per hour. High — More than 60 tasks per hour.
Duration	Select from the following: Low — Task performed for less than 1 hour. Moderate — performed 1-4 hours. High — performed more than 4 hours.
Object Weight (pounds)	Calculate the weight of the object or objects being moved, including the weight of the material handling aid (e.g. 200 lb. load + 80 lb. cart = 280 lbs.).
Awkward Posture	Awkward push/pull postures include reaching overhead, bending, twisting or leaning (forward or backward) to accomplish the task. This is often seen with overhead material handling aids, carts without handles, and specialty material handling equipment.
Physical Indicator of Excess Force	Leaning into a push, leaning away on a pull, foot slips, arm extensions, facial expressions, face or hand discoloration, and difficulty stopping are examples of physical indicators that a push/pull task may be requiring that person to use excess force.
Floor Risk Factors	Are risk factors present that may impact safely performing the task? Examples: floors that are naturally slippery, subject to wet or dry contamination that makes them slippery, uneven surfaces/elevation changes, large cracks/holes that interfere with movement, ramps, poor housekeeping, or limited aisle space.
Unusual Object Features	Examples: the device handle is slippery, bulky, too high, too low, or absent; or the load is prone to shift/surge or requires unique stability controls.
Environmental Factors	Mark if any environmental factors are present that may impact safely performing the task, such as: temperature, humidity, noise, or vibration. When the body is exposed to hot or cold temperatures (greater than 85 F or below 45 F), noise greater than 80 dBA, or prolonged vibration, it produces negative physiological effects.

Advanced Push/Pull Analysis

For information about conducting advanced push/pull assessments using a force gauge, contact **Nationwide LCS**, or conduct your own assessment by visiting the Ohio Bureau of Workers Compensation website at: <https://www.bwc.ohio.gov/employer/programs/safety/PushPullGuide/PushPullGuide.aspx>. The Ohio BWC website will assist you in completing an analysis that includes a force gauge, allowing you to quantify the percentage of the population that can safely exert the force required of the push/pull tasks. This three-step process, as shown below, will further the value of your push/pull risk assessments.

Step 1 - Measure Force using Gauge

BWC/OSU Push/Pull Guidelines*

1. Use a force gauge to measure the maximum force (pushing or pulling) needed in the task. This is the measured force. The maximum force is usually the starting force, but may be the uphill force for tasks on a slope.





Step 2 - Enter Information about Task

Action performed ¹
 ✓

Type of exertion ¹
 Straight
 Turning

Measured force (pounds, measured by force gauge)
 ✓

Hand height (inches) ¹
 ✓

Step 3 - Obtain Results

Results

According to the guideline, your task is safe for at least 80% of the population.

